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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------------|-------------|----------------------|---------------------|------------------|
| 10/517,827 | 12/14/2004 | Hiroshi Kushitani | 2004_1950A | 8795 |
| 513 | 7590 | 07/31/2006 | EXAMINER | |
| WENDEROTH, LIND & PONACK, L.L.P. | | | SUMMONS, BARBARA | |
| 2033 K STREET N. W. | | | ART UNIT | |
| SUITE 800 | | | PAPER NUMBER | |
| WASHINGTON, DC 20006-1021 | | | 2817 | |

DATE MAILED: 07/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 10/517,827 | | KUSHITANI ET AL. | |
| | Examiner | | Art Unit | |
| | Barbara Summons | | 2817 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2004 (pre-amendment).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>12/14/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-12 are rejected under 35 U.S.C. § 102(b) as being anticipated by Uu JP 10-13187.

Fig. 16 of Uu discloses a surface acoustic wave (SAW) ladder filter with series resonators and parallel resonators comprising: a first SAW resonator 51s (see also similar Fig. 1); a second SAW resonator 52s connected in series to the first SAW resonator 51s at a first node being the series wiring line between resonators 51s and 52s; a third SAW resonator 53s connected in series to the second SAW resonator 52s at a second node being the series wiring line between resonators 52s and 53s; a fourth SAW resonator 54s connected in series to the third SAW resonator 53s at a third node being the series wiring line between resonators 53s and 54s; a fifth SAW resonator being either one of 51p or 52p connected between the first node and a ground by definition of a ladder filter; a sixth SAW resonator being either one of 53p or 54p is connected between the third node and ground; and a first capacitance element 62* that has a capacitance (see e.g. section [0015], the last six lines thereof, of the attached machine translation and the last page being an attached Derwent abstract) connected between the second node and ground.

Regarding claims 2 and 3, a second capacitance element 61* is connected between the first node and ground, and a third capacitance element 63* is connected between the third node and ground. Regarding claims 4-6, the filter is formed on a piezoelectric substrate 1 (see Fig. 2) and the capacitors are disclosed to be the comb-toothed interdigital transducer (IDT) type formed on the substrate 1 with the resonators (see section [0015], the last two lines thereof) and element 62* inherently extending from the electrode forming the second node and an electrode forming ground (as evidenced by other art of record see e.g. 19 in Fig. 1 of JP 6-152317 or 20 and 21 in Fig. 1 of JP 2002-330055, both cited by Applicants).

Regarding claims 7-12, the SAW filter is disclosed as used in a cellular phone as a transmitting or receiving filter (see e.g. section [0020] of the translation), which inherently includes other elements connected to the SAW filter, e.g. an antenna, low noise amplifier in the receiving branch, power amplifier in the transmitting branch, etc.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Flowers U.S. 6,593,678 discloses (Figs. 2 and 5) a SAW ladder filter with each resonator having an IDT capacitor in parallel thereto, and shows a capacitor 620 (Fig. 6) between node B and ground, a capacitor 640 between node C and ground, and a capacitor 660 between node D and ground.

Anasako JP 11-41055 discloses a SAW ladder filter with capacitors in parallel from series nodes A and C (Fig. 6).

Plessky et al. U.S. 6,043,585 discloses a SAW ladder filter (Fig. 4a) with IDT capacitors 108 and 109 (Figs. 6a and 6b) parallel to the shunt arm resonators with one between each of series nodes 100 and 102 and ground 101.

Funemi et al. JP 2000-114923 discloses a SAW ladder filter with capacitances in parallel with all of the shunt resonators (see 9 in Fig. 4) and formed by the proximity of the wiring lines to the reflector bus bars (see the abstract).

Ueda et al. JP 8-65089 discloses a SAW ladder filter with capacitances in parallel with shunt arm resonators so as to be between series nodes and ground and shows IDT capacitors [see Fig. 10(c)].

Kommrusch U.S. 5,933,062 discloses variable capacitances 44 (Fig. 5) in parallel with the series and shunt arm SAW resonators of a ladder filter (Fig. 3) so as to be between the series nodes and ground.

Taguchi et al. U.S. 6,018,281 also discloses variable capacitances in parallel with the shunt arm resonators of a SAW ladder filter (Figs. 3, 9, 12 and 13).

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara Summons whose telephone number is (571) 272-1771. The examiner can normally be reached on M-Th, M-Fr.

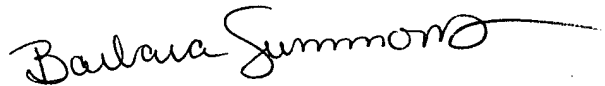
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bob Pascal can be reached on (571) 271-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2817

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

bs

July 21, 2006



BARBARA SUMMONS
PRIMARY EXAMINER